## REMARKS/ARGUMENTS

The specification has been amended to update the status of various cited commonly assigned applications and to correct an error on page 75.

Claims 1, 16, 18, 21 and 31 have been amended for reasons described below. The subject matter of cancelled Claim 12 has been incorporated into Claim 1. All of the proposed amendments are fully supported by the original disclosure including the original claims.

### Restriction Requirement

The claims of this application have been restricted between Group I (Claims 1 – 25, 31) and Group II (Claims 26-30). Applicants confirm their provisional election of Group I. In order to expedite prosecution, non-elected Claims 26-30 have been cancelled but Applicants reserve the right to include them in future divisional applications.

### Rejection Under 35 U.S.C. §112(2)

Claims 1-25 and 31 have been rejected as being indefinite for the original language defining the frontside and backside of the support.

Claims 1, 16, 18, 21, and 31 have been amended to more clearly define a "frontside" as having the thermally-developable imaging layers, and a "non-photosensitive backside" as having a backside layer comprising the backside stabilizer. Support for these definitions are provided on pages 12 (lines 21-27) and 34 (lines 5-7) of the original specification. It is believed that a skilled worker would clearly understand the location and relationship of the recited layers on opposing sides of the support as presently claimed.

The redundancy described in the Office Action does not exist in Claim 1.

These amendments thereby obviate the rejection and the rejection should be withdrawn.

### Rejections Under 35 U.S.C. §103

Claims 1-25 and 31 have been rejected as unpatentable over the combined teaching of EP 1,186,950 (EP '950) with U.S. Patent 4,212,937 (Akashi et al.) and EP 1,096,310 (EP '310). As far as it applies to claims presently in this application, this rejection is respectfully traversed. The rejection will be addressed after a brief discussion of the presently claimed invention.

Applicants' Invention:

The ability of a photothermographic material to be stored prior to imaging without undergoing changes in sensitometric or physical properties is often referred to as "raw-stock keeping" (RSK) or "shelf stability." One aspect of improving raw-stock keeping is the control of fog. Photothermographic emulsions tend to suffer from fog. Fog is spurious image density that appears in non-imaged areas of the photothermographic material after development and is often reported in sensitometric results as $D_{min}$. In efforts to make more sensitive photothermographic elements, fog is a difficult parameter to control and to maintain at a very low level, especially under conditions of high humidity.

Since photothermographic materials contain both the image-forming chemistry and the development chemistry in one or more thermally developable imaging layers, during storage and prior to use, the image-forming and development chemistry may degrade or prematurely chemically react especially in high humidity and temperature conditions. Later, upon imaging and development, this reaction will be observed as an increase in $D_{min}$ or fog in the non-imaged areas. This reaction shortens the shelf-life of photothermographic materials and is often referred to as "shelf-aging fog." A great amount of work has been done to improve the shelf-life characteristics of photothermographic materials.

Applicants want to emphasize that the problem addressed by the presently claimed invention is to stabilize the photothermographic materials prior to imaging and heat development (or processing) to reduce "shelf-aging fog". This is a "shelf stability" problem.

Applicants solved this problem by incorporating specific amine organic bases into one or more backside layers of the photothermographic materials. These compounds have a pKa greater than 5 and are preferably defined by Structure I in Claim 1. Such photothermographic materials are generally stored in stacks in the packaging or imaging apparatus so that the backside of one material (or film) is in contact with another material (or film) underneath it. Thus, the backside layers containing the amino organic base are generally in contact with the frontside imaging layers of the underlying film. In this arrangement, stabilization of the various stacked photothermographic materials can be achieved.

The noted amine organic bases have been found to solve this problem. Evidence of this fact is provided in the representative Examples of the present application in which the shelf stability of the photothermographic materials was evaluated by stacking the film strips containing the stabilizing compounds with their backside coatings in contact with the emulsion side (frontside) of similarly prepared film strips of commercially available Kodak DRYVIEW® Medical Imaging Film.

Comparative samples were also prepared and evaluated by stacking coated samples containing a backside coating formulation (prepared as above, but with the amine organic base omitted) in contact with the emulsion side (frontside) of samples of commercially available Kodak DRYVIEW® Medical Imaging Film. Strips of DRYVIEW® Film were also imaged to provide initial sensitometric data.

The details of the storage conditions are provided on page 69 of the application and the various sensitometric data from imaging after storage were used to calculate initial Dmin, contrast ("AC-1"), and photospeed ("SPD-3"). Changes (Δ) in Dmin were calculated relative to the changes (Δ) in Dmin for the comparative sample. Little loss in contrast ("AC-1) and photospeed ("SPD-3") were seen after aging. That data are shown in TABLE I (page 71) of the application, and demonstrated that certain amine organic bases having a pKa greater than 5, when placed in a backside coating in contact with the frontside of a photothermographic material, decreased the change in Dmin upon storage at high humidity and thus provided improved control of shelf-aging fog with little or no loss in contrast and or photospeed.

Rejection and Applicants' Rebuttal:

The Office Action alleges that EP '950 discloses photothermographic materials with backside stabilizers in Applicants' claimed amounts, and particularly shows compounds of Structures V and VII as relevant. Akashi et al. is cited for its disclosure of nitrogen organic bases whose pKa range is from 0.5 to 10 and include various heterocyclic compounds. EP '310 is cited for disclosing nitrogen-containing compounds to provide a material with sufficient coloration after development. The materials are also wrapped in a package. The Examiner then argues that it would have been obvious to a worker of ordinary skill in the art at the time the invention was made to use a nitrogen-containing compound known as an image stabilizer as taught in Akashi et al. or EP '310 with a reasonable expectation to stabilize a photothermographic material as claimed.

Applicants respectfully disagree for several reasons.

Firstly, Applicants point out that EP '950 is directed to an entirely different problem. EP '950 is directed to reducing "browning" in an image after development or processing (page 4, lines 1-20). Image browning can only occur after image formation, and is noticeable when the user views the image on a light box. Non-imaged or non-processed photothermographic materials cannot be viewed with a light box and thereby would not reveal a "browning" problem.

As pointed out above, the presently claimed invention is directed to solving a "shelf stability" problem with the materials prior to imaging and development. Thus, the problems addressed by Applicants and EP '950 are totally different and a skilled worker would not be led by EP '950 to solve a shelf stability problem or to Applicants' solution to the problem. Both inventions may be in the same field of imaging science, but that is irrelevant if the same problems are not addressed.

Secondly, Applicants have demonstrated that only certain amino organic bases (see Structure I compounds) solve the shelf stability problem and they were not led to those specific compounds by the benzotriazoles (Structure V) and pyrazoles (Structure VII) taught in EP '950 for a totally different problem. More specifically, the compounds within Structures V and VII of EP '950 appear to have some similar structural characteristics as Applicants' Structure I compounds but they require at least two nitrogen atoms to be adjacent in a ring whereas Applicants' Structure I compounds must have at least one carbon atom between multiple nitrogen atoms. The Structure V and VII compounds taught in EP '950 have "blocking power" sufficient to absorb UV radiation and to prevent undesirable image browning. However, the UV-blocking power of Applicants' compounds useful after processing is irrelevant because they were found to provide shelf stability prior to processing. The different behaviors of the two types of compounds are critical to solving very different problems. Nothing in EP '950 would suggest Applicants' unique classes of compounds for a different utility. Since chemical properties are so unpredictable from even a slight change in chemical structure, the Structure V and VII compounds of EP '950 used for one purpose would not suggest the use of Applicants' Structure I compounds for a different purpose.

Therefore, the rejection of all claims as unpatentable over EP '950 combined with Akashi et al. and EP '310 is in error and should be withdrawn.

In view of the foregoing amendments and remarks, reconsideration of this patent application is respectfully requested. A prompt and favorable action by the examiner is earnestly solicited.

Respectfully submitted,

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